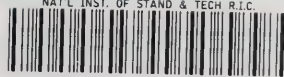


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Bibliography of Photon Total Cross Section (Attenuation Coefficient) Measurements 10 eV to 13.5 GeV, 1907-1993

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National Institute of Standards
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May 1994



U.S. DEPARTMENT OF COMMERCE
Ronald H. Brown, Secretary

TECHNOLOGY ADMINISTRATION
Mary L. Good, Under Secretary for Technology

NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY
Arati Prabhakar, Director

**Bibliography of Photon Total Cross Section (Attenuation Coefficient)
Measurements 10 eV to 13.5 GeV, 1907-1993**

J. H. Hubbell

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Abstract

A bibliography is presented of papers reporting absolute measurements of photon (XUV, x-ray, gamma-ray, bremsstrahlung) total interaction cross sections or attenuation coefficients for the elements and some compounds. The energy range covered is from 10 eV to above 10 GeV. These papers are part of the reference collection of the National Institute of Standards and Technology Photon and Charged Particle Data Center. They cover the period from 1907 through 1993 and into 1994. Thus this report is an update of the 1986 earlier report NBSIR 86-3461, and also includes additional papers dating back as far as 1966 which have since been found or brought to the attention of the author. Included with each reference are annotations specifying the energy range covered and the substances studied. This updated bibliography now includes 573 non-duplicative references to available measured data, plus 42 references to critical evaluations and review articles.

Key words: attenuation coefficient, cross section, bibliography, gamma rays, photons, x rays.

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1. Introduction

Since 1950 the National Institute of Standards and Technology (formerly National Bureau of Standards) has maintained a data base of measured and theoretical cross section data in the form of reprints, reports, and personal communications. The purpose is to provide photon (XUV, x-ray, gamma-ray, and bremsstrahlung) interaction data required in a variety of medical, industrial, defense, and scientific applications. This data base has been used from time to time for the tabulation of photon cross sections and attenuation coefficients [1-11]. Here is presented a bibliography of the published and unpublished research papers, comprising this data base, reporting measured absolute photon interaction cross sections and attenuation coefficients. This report updates an earlier bibliography by Hubbell, Gerstenberg and Saloman in the report NBSIR 86-3461 (1986)[12].

2. Compilation of the Bibliography

The items included in the bibliography have been acquired from a variety of sources. The archival journals covered by Current Contents have been reviewed both for articles on attenuation coefficients and for articles in which attenuation coefficients have been measured incidentally to their main objective. This report, as in reference [12] draws on previous review articles and bibliographies [13-24]. Also included are unpublished reports and private communications. In cases where there is multiple publication of essentially the same data only one reference is made. No attempt has been made to eliminate anomalous data sets from this listing. The dates of the items in the bibliography range from 1907 through 1993 and into 1994. Table 1 is a summary of the number of items in this bibliography by decade of publication. There are a total of 573 separate references to a total of about 22,000 data points.

3. Description of the Bibliography

This bibliography, as well as the 1986 report [12], is a further updated and enlarged version of the bibliography of reference [25]. The six-character reference symbols are again the same as those of reference [25]. The first two characters are the last two digits of the year of publication (or report). The next two characters are the first two letters of the first author's last name. The final two digits (usually 01) are added to insure uniqueness. The references are arranged in increasing order of year of publication and within each year alphabetically by first author. For each item the reference symbol is at the left margin. Next comes a listing of all authors, the journal title, volume number, pagination and year (or alternate referencing if not a journal article). The title of the article is given on the lines following. On the last line, enclosed in parenthesis, is the photon energy range studied and a listing of the elements measured in order of increasing atomic number as well as a listing of any compounds measured. In addition to an author index, an index to materials covered, arranged by atomic number for elements, and alphabetically for compounds and for named substances, is provided.

4. Discussion

This bibliography has been prepared as part of a critical evaluation of photon absorption cross sections and includes references to all data sets which provide either absolute cross sections or can be converted into absolute cross sections. Not all the data represented by this bibliography are consistent. As can be seen in the graphs of reference [25], in a graphical intercomparison of Pb data by Gerstenberg [26], and in soft x-ray intercomparisons by Saloman et al [27-29], some data sets appear to have substantial systematic errors as compared with the "main stream" of data points or with "reliable" theory. Reference [29] provides both tabular and

graphical comparisons for energies between 10 eV and 100 keV between the data covered in the 1986 bibliography [12], the semi-empirical cross section compilation of Henke et al. [14] and the theoretical photoionization values of Scofield [30]. Further evaluations, compilations and status reports on x-ray attenuation coefficients, also on the related quantity, the energy-absorption coefficient, are given in references [31-42].

The materials index at the end of this report will be useful to researchers interested in making new x-ray attenuation measurements to fill gaps in the existing experimental data which are the subject of this bibliography. The four most-measured substances are carbon (106 references), aluminum (179 references), copper (153 references) and lead (136 references). The highest-density element osmium ($Z = 76$) has yet to be measured, in any photon energy region, perhaps because it is highly toxic as well as otherwise difficult to handle.

5. Request for Additions and Corrections

Since it is desirable that the NIST data base continue to be as up-to-date, accurate, and comprehensive as possible, the author will appreciate receiving any corrections and additions to this work. He will also appreciate receiving copies of any new papers containing photon attenuation coefficient and cross section data.

Acknowledgments

The author thanks Mrs. Gloria Wiersma for her recapture of the bibliography and indexes of the reference [12] into PC machine readable form by means of an optical scanner and for her extensive editing and cross-checking of this material.

TABLE 1

Number of References in the Bibliography by Decade

DECADE	NUMBER OF REFERENCES
1900-1909	2
1910-1919	6
1920-1929	20
1930-1939	49
1940-1949	13
1950-1959	66
1960-1969	169
1970-1979	151
1980-1989	73
1990-1994	24
Total	573

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 C₂H₅Cl, Paraffin (CH₂), (C₂H₅)₂O, CHCl₃, CCl₄, Zr(CH₃)₂, C₂H₅Br, CH₃I)
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Bezdenezhnykh, G. V.	67Be01	Brytov, I. A.	64Lu01 64Lu03 66Lu01 67Er02
Bezic, N.	62Mi01 63B301 69Be01 69Be02		
		Bucklow, I. A.	68Hu02
Bianconi, A.	78Bi01	Buckman, W. G.	62Bu01
Biermann, H. H.	36Bi01	Burbidge, P. W.	22Bu01
Birenbaum, Y.	85Bi01	Cairns, R. B.	65Be01 65Sa01
Birks, L. S.	61Sw01		
Blake, R. L.	79Ba01	Callisen, F. I.	37Ca01
Bodeur, S.	76Bo01	Calvert, L. D.	75Ca01
Boltaks, B. I.	58Bo01	Canada, T. R.	77Ca01
		Cannata, A.	82Ba01

Cardona, M.	70Ca01	Codling, K.	66Co01 77Co01 78Co02
Carlson, R. W.	73Ca01 73Le01		
Carlton, R. F.	73Ca02	Cole, B. E.	78Co01
Carlton, W. R.	67Ca01	Cole, M.	64Co01
Carroll, E. E., Jr.	60Ca01	Colgate, S. A.	52Co01
Carr, L. H.	34Ca01	Colvert, W. W.	30Co01
Carter, R. W.	67Ca01	Combet Farnoux, F.	68Ja01 75Cu01 78Cu01
Carter, V. L.	67Hu01 67Hu02 68Hu01	Combley, F. H.	68Co01
Caruso, A. J.	74Ca01	Comes, F. J.	64Co02 68Co02
Cate, J. L.	65Pr01	Conner, A. L.	67Mc01 70Co01
Cesareo, R.	79Ce01	Constanten, C. P.	70Mc02
Chambers, K. C.	79Ba01	Cook, G. R.	64Co04
Champier, G.	570l01	Cooke, B. A.	62Co01
Chand, K. P.	76Ch01	Cooper, D. H.	55Co01
Chao, C. Y.	32Ch01	Cooper, M. J.	65Co01 82Me01
Chapman, J. C.	10Ch01 11Ch01	Cork, J. M.	44Co01 45Co01
Chartier, J. L.	77Ch01	Costa Lima, M. T.	76Se01
Chaudhuri, N.	71Go01 73Go03	Coster, D.	31Co01
Chien, T. S.	91Xi01	Cowan, C. L.	48Co01
Chin, A. K.	73Ph01	Crane, H. R.	39Ha01
Chipman, D. R.	55Ch01 61Ba02 63Ch01	Creagh, D. C.	76Cr01 77Cr01
Chisholm, A.	72Ch01	Cremonese, M.	68Ja01
Chong, C. S.	86Br01	Crowther, J. A.	32Cr01
Christmas, P.	74Ch01	Cukier, M.	74Cu01 75Cu01 78Cu01 81Cu01
Cipriani, A. J.	47Ma01		
Clark, K. C.	52Cl01	Cukor, P.	70Lu01
Claude, A.	83Sh02	Curtis, J. P.	54Cu01 55Ab01
Clough, A. S.	72Ra01		
Cochran, R. G.	73Ah01	Cuykendall, T. R.	36Cu01

Czock, K. H.	75Ah01	Dexter, R. N.	78Co01
Dalton, J. L.	69Da01	Dhez, P.	67Ja01
Damany-Astoin, N.	70De03		68Ja01
	71De03		70Dh01
	75Da01		74Cu01
			75Cu01
			78Cu01
Davidson, W. F.	83Sh02		
	85Sh01	Diana, M.	69Di01
			72Di01
Davisson, C. M	51Da01		
Day, R. H.	81Da01	Ding Xunliang	91Wa01
Delbianco, W.	85Sh01		92Wa01
			92Wa02
Del Grande, N. K.	67De01	Ditchburn, R. W.	60Di01
	69De01		
	69De02	Dixon, W. R.	68Di01
	71De01	Dodds, D. E.	60Eh01
	73De01		
	71De01	Donahue, D. J.	65Ba01
	83De01		
	85We01	Douglas, A. C.	67Pe01
	86De02		
	87De01	Dowe, R. M., Jr.	65Do01
	87De02		
	88De01	Drexler, G.	68Pa01
	88Ti01		
	90De01	Duane, W.	22Du01
Delsasso, L. A.	37De01	Dudley, J. M.	54Ke01
	37De02		
		Duncomb, P.	65Du01
DeMarco, J. J.	61Ba02		
	65De01	Dyer, G. R.	62Dy01
	69Di01		67Ca01
	71De02		
		Ebel, H.	70Or01
Demekhin, V. F.	90Ya01		
Denham, P.	94Gu01	Ebisu, E. S.	73He01
Denne, D. R.	70De01	Ederer, D. L.	64Al01
	70De02		64Ed01
			64Ed02
			65Lo01
de Reilhac, L.	70De03		71Ed01
	71De03		75Ed01
			78Me01
Dershem, E.	23Ol01		
	31De01	Edwards, J. E.	33He01
			68Bo01
Deslattes, R. D.	59De01	Efimov, O.	68Ef01
	68De01		
	69De01		
		Ehrenfried, C. E.	60Eh01
de Thy, B.	80He01		
		Ekstig, B.	68Ek01
Deutch, B. I.	61De01		
		Elgin, R. L.	67He01
Deutsch, M.	86De01		
		El-Kateb, A. H.	91El01
Dewire, J. W.	51De01		

El-Sayed	87Ma01	Gableske, R.	66Ga01
Elzer, A.	64Co02	Gähwiller C.	69Fu01
Eppler, H. B.	71Ah01		70Br01
	75Ah01		70Ga01
Ergun, S.	58Er01	Galbraith, W.	72Ra01
Ershov, O. A.	64Lu02	Ganeev, A. S.	60Ga01
	66Er01	Ganguly, N. K.	53Gh01
	67Er01		57Gh01
	67Er02		
Esposito, A.	82Ba01	Gardner, J. L.	77Sa01
	88Pa01		77Sa02
Esteva, J. M.	82Tu01	Garrett, R. F.	87De01
Evans, R. D.	51Da01	Garton, W.R.S.	60Pe01
Ewart, G. M.	83Sh01	Gates, D. C.	62Ga01
Fagieh, M.	79Ma01	Gauthé, B.	78Cu01
	81Ma01	Gazzara, C. P.	67Mi01
Fessel, R.	66Wa01	Gentner, W.	34Ge01
Fidecaro, M.	62Fi01		35Ge01
Finocchiaro, G.	62Fi01		35Ge02
Firk, F.W.K.	70Wu01	Gerward, L.	77Ge01
Fischer, D. W.	70Fi01		81Ge01
	71Fi01		82Ge01
			82Ge02
			83Ge01
			89Ge01
Fischer, K. F.	82Sc01	Ghezzi, C.	71Gh01
Fisher, E. I.	64Ru02	Ghose, A. M.	53Gh01
Fomichev, V. A.	66Fo01		57Gh01
	67Fo01		86Br01
	67Zh01	Ghumman, B. S.	68Gh01
	67Zi01	Giacomelli, G.	62Fi01
	68Fo01		
Fowler, W. A.	37De01	Giardina, M. D.	73Gi01
	37De02		
Freeland, J. K.	72Ra01	Gimm, H.	71Ah01
			75Ah01
French, R. L.	55Fr01	Givens, M. P.	55Wo01
Fujii, H.	76Fu01		59Ax01
Fujisaki, H.	90Fu01	Glaser, H.	51Gl01
Fujita, H.	69Fu01	Goldak, J.	69Da01
	70Br01	Gomi, K.	72Mi01
			73Mi02
Fuller, C. H.	64Ru02	Gopal, S.	73Go01
Funk, L. W.	74Sh01		73Go02

Goswami, B.	71Go01 73Go03	Hammer, J. W.	76Ha02
Govelitz, G. F.	77Ra01	Hanai, T.	52Sh01
Gowda, C.	93Na01	Hansen, H.	39Ha02
Gowda, R.	74Go01 76Go01 79Pu01 81Um01 82Um01 85Go01 93Na01	Hansen, H. H.	74Pa01 76Ha01
		Hanser, F. A.	74Ha01
		Hanumaiah, B.	89Ke01 91Ke01 92Ja01 92Ke01 92Ke02 93Ja01 93Ke01 93Ke02 93Ke03 94Ke01
Grattan, K.T.V.	80Gr01		
Greening, J. R.	74Mi01		
Gregg, E. C.	75Ra01		
Gribovskii, S. A.	66Lu01 66Lu02 67Zi01 73Gr01	Hart, M.	86De01
		Hartl, W.	76Ha02
Griffiths, G. M.	5iAr01	Haslam, R.N.H.	58Be01
Grimvall, G.	69Gr01	Hayes, W.	72Ha01
Grodzins, L.	65Al01	He, Z. X.	94Sa01
Groetzinger, G.	45Gr01	Heath, R. L.	53Be01
Grosskurth, K.	34Gr01	Heil, L. M.	33He01
Gudat, W.	70Ca01	Heinrich, K.F.J.	66He01 68Ho01
Gullikson, E. M.	94Gu01		
Gundrum, H.	71Ah01 75Ah01	Henke, B. L.	67He01 73He01
Gurevich, G. M.	80Gu01	Henrich, V. E.	69Ra01
Haddad, G. N.	77Sa01 77Sa02 94Sa01	Henry, L. C.	71He01
		Hewlett, C. W.	21He01
Haensel, R.	68Ha01 69Ha01 69Ha02 69Ha03 69So01 70Ha01 70Ha02 94Sa01	Hildebrandt, G.	73Hi01
		Hill, R. D.	37Hi01
		Hirai, Y.	89Wa01
		Hoffman, E. J.	75Ph01
		Hogg, W. R.	72Ra01
Hahn, T. M.	34Ha01	Holweck, F.	20Ho01 28Ho01
Halpern, J.	39Ha01		
Hamley, J. R.	77Co01 78Co02	Homma, S.	74Ho01 76Fu01

Hon, P. K.	68Ho01	Jaegle, P.	66Ja01
Hopkins, J. I.	59Ho01		67Ja01
Horsley, R. J.	58Be01		68Ja01
Hoshi, Y.	76Fu01		70Dh01
			74Cu01
			75Cu01
			78Cu01
Howland, P. R.	54Ho01	Jahagirda, H. A.	89Ke01
Hribar, M.	73Hr01		92Ja01
			93Ja01
Hubbell, J.	53Hu01	Jamnik, D.	62Mi01
Hübel, H.	59Hu01		63Be01
			69Be01
			69Be02
Huber, P.	54Sc01		
Hudson, R. D.	67Hu01	Janik, F. J., Jr.	60Ja01
	67Hu02	Janzen, H.	52Ja01
	68Hu01		
		Jarvinen, M.	69Ja01
Huffman, R. E.	63Hu01	Jaworowski, R. J.	70Lu01
	73Ka01		
Hughes, G. D.	64Co01	Jennings, L. D.	63Ch01
	66Hu01	Jin Zheng	84Ye01
	68Hu02		
Hull, A. W.	16Hu01	Jnanananda, S.	57Ra01
			58Sa01
Hunter, W. R.	64Hu01		61La01
	66Co01		63Ra01
Hupfeld, H. H.	31Me01	Johnson, J. M.	76St01
Hussain, M.	90Qu01	Johnston, R. W.	54Jo01
Hutcheon, R. M.	74Sh01	Jones, M. T.	36Jo01
Hutchinson, M.H.R.	80Gr01	Jones, W. B.	59Jo01
			60Jo01
Ikeda, H.	76Fu01		
Inkinen, O.	69Ja01	Jönsson, E.	28Jo01
	70In01	Joyet, G.	74Jo01
Ishii, T.	76Fu01	Joyet, M. L.	74Jo01
Israilev, I. M.	67Be01	Judge, D. L.	73Ca01
			73Le01
Itano, A.	74Ho01		77Le01
	76Fu01		77Ph01
			79Wu01
Ito, K.	90Ma01		81Wu01
	93Ma01		81Wu02
			82Wu01
Izrailev, I. M.	60Ga01		83Wu01
			85Wu01
Jackson, R. S.	65Ma01		91Xi01
Jacobsen, J. C.	36Ja01	Kahane, S.	85Bi01
		Kajrys, G.	85Sh01

Kane, P. P.	77Ka01	Kodre, A.	73Hr01
Kanemori, Y.	60Ka01 67Ka01	Kohlhaas, E.	68Ko01
Karev, V. N.	64Ka01	Kohlrausch, K.W.F.	17Ko01
Katayama, D. H.	73Ka01	Kosaki, M.	85Sh01
Katsuura, K.	74Ho01	Kosman, M.	34Al02
Kefi, M.	87Ke01	Kreger, W. E.	54Ho01
Keitel, G.	69Ha03 70Ha01	Kroger, H.	63Kr01
Keith, H. D.	75Lo01	Kröning, M.	75Ah01
Keller, J.	76Lu01	Kubo, H.	70Ku01
Kennett, T. J.	71He01	Kumari, J. S.	93Na01
Kenney, R. W.	S4Ke01 S6An01 56An02 S7Br01 62Ga01	Kunju, S. N.	86Va01
		Kunz, C.	68Ha01 69Ha01 69Ha02 69Ha03 69So01 70Ha01
Kernel , G.	63Be01 69Be01 69Be02	Kurtz, H.	28Ku01
Kerur, B. R.	89Ke01 91Ke01 92Ke01 92Ke02 93Ke01 93Ke02 93Ke03 94Ke01	Küstner, H.	31Ku01 32Ku01
		Kusumegi, A.	72Mi01 73Mi02
		Kyser, D. F.	72Ky01
		Labov, S.	85La01
Ketelaar, H.	34Ke01	Lakshminarayana, V.	61La01 63Ra01 76Ch01 76Re01 77Mu01 77Ra02 86Pr01 87Sa01 87Sa02
Khan, J. M.	64Kh01		
Khoperskii, A. N.	90Ya01		
Kihara, N.	90Fu01		
Killean, R.C.G.	75Ca01		
King, A. F.	72Ra01	Lang, J.	73Wa01 73Wa02 75La01
Kirz, J.	87Ya01		
Kiszenick, W.	74Ki01	Lang, K. C.	32Ma01
Knasel, T. M.	68Kn01	Laporte, D.	82Tu01
Kneedler, E. M.	87De01	Larrabee, J. C.	63Hu01
Knerr, R. P.	67Kn01	Larrad, A. J.	71Ot01
Koch, H. W.	60Wy01	Laubert, S.	41La01

Lauritsen, C. C.	34Re01	Lowry, J. F.	65Lo01
	37De01		
	37De02	Lublin, P.	70Lu01
LaVilla, R. E.	69La01	Lucas, G. J.	64Og01
Lawrence, J. L.	76La01	Lukirskii, A. P.	63Lu01
	77La01		64Lu01
	79Be01		64Lu02
	79La01		64Lu03
			66Er01
Lawson, J. L.	49La01		66Lu01
			66Lu02
Lazareva, L. E.	80Gu01		67Er02
			67Fo01
Ledingham, R. B.	67He01		
Lee, L. C.	73Ca01	Luo Pingan	91Wa01
	73Le01		92Wa02
	77Le01	Lurio, A.	75Lu01
	77Ph01		76Lu01
	79Wu01		77Lu01
Lee, P.	52Le01	Machali, F. M.	79Ma01
	52We01		81Ma01
	52We02		
	53Le01	Madden, R. P.	66Co01
	55Le01		
	81Da01	Madhusudanan, K.	86Va01
Lefeld-Sosnowska, M.	64Le01	Maeda, K.	90Ma01
			93Ma01
Lent, R. E.	67He01	Mahmoud, K. A.	57Ma01
Levine, A.	72Mc01	Maitra, A. T.	36Ba01
Lewis, G. M.	72Ra01	Malamud, E.	59Ma01
Li Jingwen	84Ye01	Mallett, J. H.	69De01
Lihl , F.	70Or01	Manalis, M.	75Ed01
Ling, D.	65Li01	Mancini, C.	79Ce01
Lingam, S. C.	83Li01	Mannhart, W.	76Ma01
	84Ba01		
	84Li01	Manson, S. T.	87De01
	84Li02		
	85Re01	Mantler, M.	74Ma01
Lingappa, N.	86Si01	Marmo, F. F.	58Ma01
Little, R.	66Wa01	Marr, G. V.	76We01
Loewenstein, M. J.	72St01		78Ma01
Lokan, K. H.	74Sh01	Martin, L. H.	25St01
			32Ma01
Lombardi, G. G.	78Lo01	Martin, L. J.	85Mi01
Loomis, T. C.	75Lo01		
Looney, L. D.	70Mc01	Maruyama, K.	74Ho01
	70Mc02		76Fu01

Mathieson, A. McL.	75Ca01 76La01	Metzger, P. H.	64Co04
Matin, P.	60Ma01	Middleton, R. M.	67Mi01
Matsunaga, F. M.	65Ma01 67Ma01	Mika, J. F.	85Mi01
Mavroyannakis, E.	70Ma01 73Ma01	Miklavzic, U.	62Mi01 69Be01
Mayneord, M. V.	35Ma01 47Ma01	Millar, R. H.	73Mi01 74Mi01
Mazumder, K. C.	22Du01 30Ma01	Mishina, M.	72Mi01 73Mi02
Mazur, V. M.	80Gu01	Missoni, G.	66Ja01 67Ja01
Mazzone, G.	69Di01 72Di01	Miyachi, T.	72Mi01 73Mi02 74Ho01
McClintock, J. E.	72Mc01	Miyahara, T.	90Fu01
McCrary, J. H.	67Mc01 70Co01 70Mc01 70Mc02	Mobilio, S.	88Pa01
McDaniel, B. D.	47Mc01	Moffatt, J.	58Mo01 59Mo01
McDonald, C. A., Jr.	54Ke01 56An01 56An02	Mohr, E. I.	52We01
McGuire, E. J.	63Pe01	Moljk, A.	73Hr01
McMillan, E.	34Mc01	Moreh, R.	69Mo01 74Ba01 75Mo01 75Mo02 85Bi01
Mehlman, G.	78Me01 82Me01	Möring, M.	66Ga01
Mehta, M. K.	84Na01 84Ra02 88Na01	Mrowka, S.	94Gu01
Meitner, L.	31Me01	Mudahar, G. S.	93Si01
Melford, D. A.	65Du01	Müller, I.	38Mu01
Mercure, R.	55Ab01	Murty, R. C.	64Mu01
Merisalo, M.	69Ja01	Murty, V.R.K.	76Ch01 76Re01 77Mu01 77Ra02
Merkulov, S. Y.	80Gu01	Nagata, H.	90Fu01
Merlini, A.	65Me01 67Ba01 71Gh01 73Gi01	Nagel, D. J.	81Da01
Messner, R. H.	33Me01	Nair, K.P.G.	93Na01
Metzger, F. R.	61De01	Nakagiri, N.	90Fu01
		Nakamori, H.	70Ku01

Namioka, T.	90Ma01	Ottewell, D.	710t01
Narasimhan, K. L.	86Pr01 87Sa01 87Sa02	Paakkari, T.	67Pa01 68Pa02 70In01
Nathuram, R.	84Na01 88Na01	Pace, S.	65Me01 71Gh01
Nayak, N. G.	86Si01	Pahor, J.	73Hr01
Neupert, W. M.	57To01	Panzer, W.	68Pa01
Nichiporuk, B.	67Ni01	Pareek, P. N.	85Sa01
Nicholson, J. P.	72Ch01	Park, R. J.	64Og01
Nikolaev, F. A.	66Ni01	Parkinson, W. C.	49Pa01
Nishikawa, K.	74Ho01	Parkinson, W. H.	78Lo01
Nordfors, B.	61No01 61No02	Parobets, A. S.	66Fo01
Noreland, E.	61No02 62No01	Parthasaradhi, K.	69Pa01 73Ra02 73Ra03 73Ra04 73Ra05 74Pa01 76Ha01 77Mu01 77Ra02 86Pr01 87Re01 87Sa01 87Sa02 88Pa01
Notz, D.	69No01		
Nowak, A.	85Sh01		
O'Bryan, C. L.	73Ka01		
Ogawa, M.	73Ca01 73Le01		
Ogier, W. T.	64Og01		
Ohshima, E.	76Fu01	Patel, J. R.	68Ba01
Okamoto, S.	52Sh01	Paul, R. S.	54Pa01
Okuna, H.	72Mi01 73Mi01 74Ho01 76Fu01	Peaple, L.H.J.	78Pe01
		Peirce, S. E.	14Br01
		Pell, E. M.	51To01
Oliver, A. J.	67De01 69De01 69De02 71De01 73De01 81De01	Pelliccioni, M.	82Ba01 88Pa01
		Perkin, J. L.	67Pe01
		Persson, E.	68Ef01 69Gr01
Olmer, P.	57Ol01		
Olson, A. R.	23Ol01	Perumallu, A.	84Ra01 85Pe01
Onori, G.	68Ja01		
Ortner, B.	70Or01	Pery-Thorne, A.	60Pe01
Orton, L.H.H.	32Cr01	Perzl, F.	68Pa01
		Pesonen, A.	70In01

Peterson, H.	85Re01	Raccah, P. M.	69Ra01
Peterson, T. J.	63Pe01	Radler, K.	69Ha02 74Ra02
Phelps, M. E.	75Ph01		
Phillips, E.	77Le01 77Ph01	Railton, R.	67Br01 67Br02
Phillips, L. F.	71Be01	Raju, G. K.	87Sa02
Phillips, W. C.	73Ph01	Ramanaiah, K. V.	86Pr01 87Sa02
Piccard, A.	34Ke01	Ramani,	73Ra01
Pidd, R. W.	44Co01	Ranganathaiah, C.	81Um01 84Um01
Piper, S. H.	10Ch01		
Pirc, R.	63Be01	Rao, A. S.	63Ra01
Plachenov, B. T.	58Bo01	Rao, A.S.N.	84Ra01 85Pe01
Plassmann, E. H.	67Mc01 70Co01	Rao, B.D.N.	57Ra01
Podolyak, E. R.	82Al01	Rao, B. M.	73Ra02 73Ra03
Post, R. F.	56An02	Rao, B.V.T.	73Ra02 73Ra03 73Ra04
Potter, D. L.	64Kh01		
Pounds, K. A.	62Co01	Rao, D. V.	77Ra01 81Ra01 82Ra01
Powers, D.	85Go01		
Prakhya, R. S.	86Pr01	Rao, G. K.	84Ra01 85Pe01
Prasad, G. A.	73Ra05	Rao, I.S.S.	84Na01 84Ra02 88Na01
Prasad, R.	78Pr01 80Pr01		
Pregenzer, A. L.	79Ba01	Rao, J. R.	63Ra01 69Pa01 76Ch01 76Re01 77Mu01 77Ra02
Premachand, K.	76Re01 87Re01		
Prevo, C. T.	65Pr01		
Puckett, J. M.	67Mc01	Rao, K. S.	73Ra02 73Ra03 73Ra04 73Ra05 77Mu01 77Ra02
Puttaswamy, K. S.	76Go01 79Pu01 81Um01		
Puttaswamy, N. G.	73Ra01		
Quamruzzaman, K.	90Qu01	Rao, P. S.	75Ra01
Quivy, R.	66Qu01	Rao, P.V.R.	69Pa01 73Ra04 73Ra05 87Re01
Rabe, P.	70Ha02 74Ra02		

Rao, V. V.	73Ra02 77Sh01 78Ra01 81Ra01 82Ra01	Rothe, D. E.	71Ro01
Rao-Sahib, T. S.	74Ra01	Roux, A. M.	76Ro01
Rappaport, S.	72Mc01	Roy, J.	85Sh01
Rawlinson, W. R.	72Ra01	Russell, P. C.	62Co01
Read, J.	34Re01 35Re01	Rustgi, O. P.	64Ru01 64Ru02 65Ru01 72Br01
Reddy, D.K.S.	76Ch01 76Re01	Rutherglen, J. G.	67Br01 67Br02
Reddy, D.V.K.	83Li01 84Ba01 84Li01 84Li02 85Re01	Sadler, C. A.	07Ba01 09Ba01
Reddy, B. S.	87Re01	Sahota, H. S.	72Sa01
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Wang Xinfu	91Wa01 92Wa01	Wilson, J. E.	68Co01 71Ot01
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60Wy01	62Ga01	62Wi01	64Co04	65Be01	65Sa01	66Be01	66Be02				
67Br01	67He01	68Co02	69No01	70De01	70Mc01	71Be01	72Ra01				
72St01	73Go03	76Fu01	81Um01	82Al01	89Sa01						
Z = 2				He				18 References			
31De01	55Le01	59Ax01	61Ba01	62Wi01	64Co02	64Lu01	64Sa01				
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Z = 3				Li				21 References			
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71Ro01	73Go03	75Ah01	81Um01	82Me01							
Z = 4				Be				45 References			
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64Te01	65Ba01	66Be01	67Mc01	69Be01	69De02	69Mo01	69Se01				
70Co01	70Ha01	73Ph01	75Ah01	75Mo01	75Mo02	76Ha02	84Na01				
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Z = 6				C				106 References			
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34Re01	35Ma01	36Cu01	36Ja01	38An01	39Wr01	45Ro01	47Ma01				
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54Pa01	55Ch01	55Co01	56An02	57Ma01	58Ba01	58Be01	58Er01				
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61La01	62Ba02	62Fi01	62Wi01	63Be01	64Mu01	64Og01	64Sa03				
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73Go02	73Go03	73Mi01	74Ho01	74Jo01	75Ah01	75Ca01	75Mo01				
75Mo02	77Mu01	78Co01	79Be01	79Pu01	81Ra01	81Um01	82Ge02				
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64Mu01	64Og01	64Te01	65Al01	65Ba01	65Co01	65Th01
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Z = 14		Si		33 References		
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Z = 18				Ar	33 References			
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62Bu01	62Sc01	62Wi01	63Ch01	63Lu01	64Al01	64Co02	64Ru01	
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93Ma01								
Z = 19				K	8 References			
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Z = 20				Ca	16 References			
17Ko01	22Wi01	35Ma01	36Ja01	39Wr01	52Sh01	65We01	66Ni01	
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Z = 21				Sc	3 References			
67Ca01	81Ra01	82Ra01						
Z = 22				Ti	42 References			
39Wr01	52Sh01	53Hu01	59De01	59Ma01	60Eh01	61Sw01	64Ka01	
65Ru01	65We01	66Hu01	67Ca01	67Er01	67Er02	67Kn01	67Mc01	
67Mi01	68Ho01	68Hu02	68Ko01	69Da01	69De02	69So01	70Co01	
70Fi01	71He01	72Ky01	72Mc01	72Mi01	73Go03	74Si01	75Mo01	
76Ch01	76Lu01	77Lu01	81Um01	84Ra01	87De02	88Pa01	89Un01	
90De01	90Qu01							
Z = 23				V	23 References			
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75Mo02	76Ha01	76Lu01	77Lu01	78Ra01	80Pr01	89Un01		
Z = 24				Cr	21 References			
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65We01	67Er01	67Er02	68Ko01	69So01	71Fi01	72Di01	72Ky01	
81Um01	84Ra01	87De02	90De01	90Fu01				
Z = 25				Mn	12 References			
22Wi01	39Wr01	52Sh01	57To01	58Sa01	65We01	67Mi01	69So01	
72Ky01	78Br02	81Um01	84Ra01					
Z = 26				Fe	66 References			
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30Ta01	31Me01	32Ma01	32Ro01	34Ke01	35Ma01	35Re01	36Ja01	
39Wr01	45Co01	47Ma01	48Ad01	52Sh01	53Be02	57Ma01	57To01	
59Ba01	59De01	60Eh01	61Ba02	62Ba02	62Wi01	64Ka01	65Co01	
65We01	67Ca01	67Ka01	67Kn01	67Mc01	67Mi01	67Pa01	68Ko01	
69Al01	69Da01	69De02	69Mo01	69So01	70Co01	70Ma01	71De01	
72Ky01	73Ah01	73Go03	74Si01	75Mo01	75Mo02	78Br01	78Lo01	
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Z = 27				Co	23 References			
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64Ka01	65Co01	65We01	66Qu01	67Ca01	68Ho01	68Ko01	69Mo01	
69So01	72Ky01	75Mo01	76Lu01	78Br01	84Ra01	89Un01		
Z = 28				Ni	58 References			
09Ba01	14Br01	17Ko01	22Wi01	23Ri01	26Al01	28Jo01	32Ma01	
32Ro01	34Gr01	36Cu01	41La01	52Sh01	53Hu01	57To01	59De01	
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67Er02	67Mc01	68Ho01	68Hu02	68Ko01	69Da01	69Di01	69Mo01	
69So01	70Co01	70Lu01	70Ma01	72Ky01	74Si01	75Mo01	75Mo02	
76Lu01	77Lu01	78Br01	80Pr01	81Ra01	81Um01	83De01	84Ra01	
84Vi01	84Ye01	86De02	87De02	88De01	88Pa01	89Ke01	89Un01	
90De01	90Fu01							

Z = 29		Cu		153 References			
07Ba01	09Ba01	14Br01	16Hu01	17Ko01	20Si01	21Ri01	22Du01
22Wi01	23Ri01	25St01	26Al01	28Jo01	29Ba01	30Ta01	31Co01
31Me01	32Ch01	32Ma01	32Ro01	33He01	34Gr01	34Ha01	34Mc01
35Ge02	35Ma01	35Re01	36Cu01	37Hi01	38An01	41La01	44Co01
45Co01	47Ma01	48Ad01	48Al01	48Co01	49La01	49Wa01	51Ar01
51Da01	51De01	52Co01	52Ja01	52Ro01	52Sh01	52Wy01	53Be02
53Gh01	54Ho01	54Pa01	54Sc01	55Co01	55Fr01	56Ba01	57Ra01
57Sc01	57Sc02	57To01	58Mo01	58Sa01	59Ba01	59De01	59Ho01
59Hu01	59Ma01	60Eh01	60Ka01	61Ba02	61La01	62Dy01	62Fi01
62Wi01	63Ra01	63So01	64Co03	64Ka01	64Kh01	64Mu01	65Ba01
65Co01	65Th01	65We01	66Be01	66Hu01	67Ba01	67De01	67Kn01
67Mc01	68Bo01	68Ho01	68Hu02	68Kn01	68Pa01	69Da01	69De02
69Mo01	69So01	69We01	70Co01	70Ku01	70Or01	71Ah01	71Gh01
71He01	72Ky01	72Sa01	73Ah01	73Ca02	73Go01	73Go02	73Mi01
73Ra02	74Ch01	74Go01	74Ho01	74Ma01	74Pa01	74Si01	75Mo01
76Ch01	76Go01	76Ha01	76Ro01	77Mu01	77Sh01	78Br01	78Ra01
79Ce01	79Ma01	79Pu01	80He01	81Um01	82Ge01	82Ge02	84Na01
84Ra01	84Ra02	86Va01	87De02	87Ma01	87Re01	88Na01	89Ke01
89Un01	90De01	91Ke01	91Wa01	92Wa01	93Ke01	93Ke02	93Ke03
93Na01							
Z = 30		Zn		45 References			
07Ba01	09Ba01	14Br01	17Ko01	22Wi01	26Al01	30Ta01	31Co01
31Me01	32Ch01	32Ma01	32Ro01	35Ge02	36Ja01	39Wr01	52Sh01
53Be02	57Gh01	57Ra01	57To01	58Bo01	59Ho01	60Eh01	65Me01
65We01	67Ca01	67Kn01	67Mc01	68Ko01	69De02	69Mo01	70Co01
71Gh01	72Ky01	73Go03	74Ma01	74Si01	75Mo01	75Mo02	80Pr01
81Ma01	84Ra01	87Ma01	89Un01	90Qu01			
Z = 31		Ga		2 References			
57To01	59We01						
Z = 32		Ge		19 References			
51Gl01	56To01	57To01	58Bo01	61Bo01	62Ba03	64Ba01	65De01
65Li01	67Er02	68Ba01	68Ef01	68Pa01	69Gr01	70Ca01	73Go03
73Hi01	75Mo01	77Ge01					
Z = 33		As		4 References			
17Ko01	39Wr01	67Mc01	73Go03				
Z = 34		Se		12 References			
17Ko01	35Ma01	36Bi01	36Sc01	38Mu01	39Wr01	52Sh01	58Bo01
62Vo01	70Ca01	73Hr02	84Ra01				
Z = 35		Br		10 References			
22Wi01	32Ro01	38Mu01	39Ha02	39Wr01	53Gh01	57Gh01	73Go03
81Um01	84Ra01						
Z = 36		Kr		19 References			
31De01	60Pe01	63Ch01	64Lu01	64Ru02	66Sa01	67He01	69Ha03
69Wu01	70Br01	70Mc02	71Ed01	75La01	76We01	86De01	89Sa01
90Ma01	90Ya01	93Ma01					
Z = 37		Rb		2 References			
73Go03	81Um01						
Z = 38		Sr		5 References			
22Wi01	39Wr01	68Ko01	81Um01	84Ra01			
Z = 39		Y		7 References			
22Wi01	80Pr01	81Ra01	82Ra01	84Ba01	84Li01	92Wa02	

Z = 40		Zr		28 References			
17Ko01	22Wi01	39Wr01	53Hu01	59De01	60Eh01	61Sw01	64Ka01
66Hu01	67Mc01	67Zh01	68Ho01	68Hu02	68Ko01	69De02	70Co01
73Ah01	74Go01	74Ma01	75Mo01	76Ch01	76Go01	76Lu01	77Lu01
77Mu01	77Ra02	79Pu01	81Um01				
Z = 41		Nb		17 References			
17Ko01	36Jo01	61Sw01	62Wi01	66He01	66Hu01	67Mc01	67Zh01
68Bo01	68Ho01	68Hu02	68Ko01	70Co01	74Ma01	74Su01	76Lu01
77Lu01							
Z = 42		Mo		41 References			
17Ko01	21Ri01	22Wi01	25St01	26Ri01	32Ma01	32Ro01	34Gr01
36Jo01	39Wr01	52Sh01	52Wy01	53Hu01	59De01	59Ma01	60Eh01
61Sw01	62Wi01	64Ka01	67De01	67Kn01	67Mc01	67Zh01	68Ho01
68Ko01	69De02	70Co01	71He01	73Go03	74Pa01	75Mo01	76Ha01
76Lu01	77Ka01	77Lu01	77Sh01	78Pr01	78Ra01	84Ra01	93Ke01
93Ke02							
Z = 45		Rh		4 References			
34Gr01	35Ma01	64Ka01	68Ek01				
Z = 46		Pd		13 References			
14Br01	25St01	26Al01	32Ma01	35Ma01	59De01	62No01	64Ka01
66Hu01	67Zh01	68Hu02	87Ke01	87Sa02			
Z = 47		Ag		75 References			
07Ba01	09Ba01	14Br01	17Ko01	21Ri01	22Wi01	25St01	26Al01
26Ri01	28Jo01	29Ba01	31Me01	32Ma01	32Ro01	33Wo01	34Gr01
34Ha01	35Ge02	36Bi01	36Ja01	36Jo01	36Sc01	37Hi01	38An01
41La01	47Ma01	52Sh01	52Wy01	53Be02	57Gh01	58Mo01	59De01
59Hu01	60Eh01	61No01	62Wi01	64Co03	64Lu02	66Hu01	67Mc01
67Zh01	68Gh01	68Ha01	68Ho01	68Hu02	68Ko01	69De02	69Mo01
70Co01	72Sa01	73Mi02	73Ra03	74Go01	74Ma01	75Lu01	75Mo01
75Mo02	76Go01	76Lu01	77Lu01	77Mu01	77Ra02	78Pr01	79Ce01
79Pu01	81Ma01	81Ra01	81Um01	84Ra01	87Ke01	87Ma01	88Na01
89Ke01	91Ke01	93Ja01					
Z = 48		Cd		36 References			
17Ko01	22Wi01	30Ta01	32Ro01	34Gr01	36Bi01	36Sc01	38Mu01
41La01	52Ja01	52Sh01	53Be02	54Pa01	56Ba01	57Gh01	59De01
60Ma01	61No02	62Wi01	63Ra01	67Kn01	70Ma01	71He01	73Ra04
73Ra05	74Ra01	75Mo01	76Ch01	78Co02	80Pr01	81Um01	84Ra01
84Ye01	87Ke01	87Sa01	90Qu01				
Z = 49		In		10 References			
34Gr01	60Ma01	61No02	62Wi01	64Hu01	67Mc01	80Pr01	82Ra01
84Ra01	87Ke01						
Z = 50		Sn		86 References			
07Ba01	09Ba01	14Br01	17Ko01	22Wi01	25St01	26Al01	26Ri01
27Ri01	30Ta01	31Ku01	31Me01	32Ch01	32Ma01	32Ro01	34Gr01
34Ke01	34Mc01	35Ma01	35Re01	36Bi01	36Jo01	41La01	48Co01
49La01	49Wa01	51Da01	51De01	52Co01	52Ja01	52Ro01	52Sh01
53Be02	53Hu01	54Pa01	54Sc01	55Co01	57Gh01	57Ma01	57Ra01
57Sc01	59De01	59Ma01	60Eh01	61No02	62Wi01	65Ba01	66Be01
66Co01	66Lu02	66Qu01	67De01	67Kn01	67Mc01	68Gh01	68Ha01
68Ho01	69De02	69Pa01	70Co01	71Ah01	72Sa01	73Go01	73Go02
73Mi02	74Ch01	74Go01	74Ma01	74Pa01	75Mo01	76Go01	76Ha01
77Mu01	78Ra01	79Ce01	79Pu01	80Gu01	83De01	84Ra01	84Ye01
86De02	87Ke01	89Ke01	90Qu01	91Wa01	93Ja01		

Z = 51		Sb		10 References			
17Ko01	30Ta01	32Ro01	36Bi01	39Wr01	52Sh01	53Be02	61No02
70Ma01	84Ra01						
Z = 52		Te		11 References			
17Ko01	36Bi01	36Sc01	39Wr01	52Sh01	55Wo01	58Bo01	61No02
66Lu02	73So01	84Ra01					
Z = 53		I		12 References			
22Wi01	35Ma01	36Ja01	38Mu01	39Ha02	39Wr01	53Gh01	63Sc01
73Go03	81Um01	84Ra01	87Ke01				
Z = 54		Xe		26 References			
31De01	34Wh01	63Ch01	64Ed01	64Lu01	64Ru02	65Ma01	65Wa01
66Ga01	66Lu01	66Sa01	67He01	67Ni01	67Zi01	68De01	69Ha03
69Wu01	70Mc02	71Be01	71Ed01	75Ed01	75La01	87Ke01	89Sa01
90Ya01	93Ma01						
Z = 55		Cs		3 References			
71Ot01	73Go03	80Gr01					
Z = 56		Ba		11 References			
22Wi01	26Al01	38Mu01	68Ko01	71Ot01	73Go03	74Ra02	81Um01
82Sc01	84Ra01	93Ja01					
Z = 57		La		8 References			
67Mc01	67Zi01	69De02	70Co01	71Ot01	73Go03	82Um01	84Ba01
Z = 58		Ce		11 References			
38Mu01	39Wr01	67Zi01	69Mo01	70Ha02	70Or01	71Ot01	73Go03
75Mo01	82Um01	84Ba01					
Z = 59		Pr		6 References			
61Bo02	67Zi01	69Da01	70Ha02	82Um01	84Ba01		
Z = 60		Nd		8 References			
67Kn01	67Zi01	70Ha02	70Or01	73Go03	80Pr01	82Um01	84Ba01
Z = 62		Sm		9 References			
67Zi01	69De01	69De02	70Ha02	70Or01	73Go03	77Mu01	82Um01
84Ba01							
Z = 63		Eu		2 References			
67Zi01	84Ba01						
Z = 64		Gd		17 References			
67Kn01	67Mc01	67Zi01	68Ho01	69Da01	69De02	70Co01	70Or01
73Go03	77Ra01	80Gu01	81Cu01	81Ra01	82Ra01	82Um01	84Ba01
84Li01							
Z = 65		Tb		5 References			
69De01	69De02	73Gr01	84Ba01	86Pr01			
Z = 66		Dy		8 References			
67Zi01	73Go03	81Cu01	81Ra01	82Ra01	82Um01	84Ba01	84Li01
Z = 67		Ho		9 References			
67Kn01	67Zi01	69De01	69De02	70Or01	80Gu01	82Um01	84Ba01
86Pr01							
Z = 68		Er		8 References			
67Zi01	69Da01	80Gu01	82Um01	84Ba01	84Li01	86Pr01	87Sa01

Z = 69		Tm		4 References			
67Zi01	69De01	69De02	84Ba01				
Z = 70		Yb		9 References			
67Kn01	67Zi01	68Co01	69De01	69De02	70Or01	73Go03	80Gu01
84Ba01							
Z = 71		Lu		2 References			
67Zi01	68Co01						
Z = 72		Hf		8 References			
64Ka01	67Mc01	68Ko01	69De01	69De02	70Co01	76Lu01	80Gu01
Z = 73		Ta		46 References			
34Gr01	34Ha01	35Ma01	36Jo01	41La01	51Da01	52Sh01	53Be02
53Hu01	54Ho01	59Ma01	62Wi01	66He01	66Hu01	67De01	68Co01
68Ho01	68Hu02	68Ja01	68Ko01	69De02	69Ha02	69Mo01	73Mi02
74Go01	74Pa01	75Mo01	76Go01	76Lu01	77Ka01	77Lu01	77Mu01
77Ra02	77Sh02	78Ra01	79Pu01	80Gu01	82Um01	83De01	83Li01
83Sh01	85Re01	86De02	93Ke01	93Ke02	93Ke03		
Z = 74		W		43 References			
17Ko01	26Al01	26Ri01	31Me01	32Ro01	34Gr01	34Ha01	41La01
52Ja01	52Sh01	52Wy01	53Be02	54Ho01	58Sa01	59De01	61La01
62Wi01	66Qu01	67De01	67Kn01	67Mc01	68Gh01	68Ko01	68Pa02
69De02	69Ha02	70Co01	70Lu01	71He01	73Mi02	73Ra02	75Mo01
75Mo02	76Lu01	77Lu01	77Mu01	78Pr01	80Gu01	82Ra01	83Li01
84Ra01	85Re01	90Qu01					
Z = 75		Re		2 References			
69Ha02	76St01						
Z = 77		Ir		4 References			
41La01	69De01	75Cu01	81Cu01				
Z = 78		Pt		33 References			
07Ba01	09Ba01	14Br01	26Al01	28Jo01	29Ba01	32Ro01	33Wo01
34Gr01	35Ma01	41La01	47Ma01	52Co01	52Sh01	53Be02	59De01
60Eh01	62Wi01	68Ho01	68Ja01	69Ha02	69Pa01	74Ch01	78Pr01
82Ra01	83De01	86De02	86Pr01	87Ma01	87Re01	87Sa01	87Sa02
88Pa01							
Z = 79		Au		63 References			
09Ba01	14Br01	17Ko01	22Wi01	26Al01	26Ri01	29Ba01	31De01
32Ro01	33Wo01	34Gr01	36Sc01	38An01	41La01	52Co01	52Sh01
53Be02	59Be01	59De01	60Ma01	62Wi01	64Lu02	65Al01	66Be01
66Hu01	66Ja01	67Er01	67Er02	67Mc01	68Gh01	68Ho01	68Hu02
69De02	69Ha02	70Co01	70Lu01	73Ra03	74Go01	74Ha01	74Ma01
74Pa01	75Lu01	75Mo01	76Go01	76Lu01	76Re01	77Ch01	77Lu01
77Sh01	77St01	78Ra01	79Ce01	79Ma01	79Pu01	80Gu01	81Cu01
83De01	83Li01	85Re01	86De02	87Ma01	87Re01	88Pa01	
Z = 80		Hg		13 References			
17Ko01	31Me01	31Ub01	32Ro01	36Ja01	47Ma01	52Sh01	57Gh01
57Ra01	64Mu01	66Qu01	73Go03	82Ra01			
Z = 81		Tl		4 References			
38Mu01	52Sh01	61De01	65Do01				

Z = 82		Pb		136 References			
16Hu01	17Ko01	21Ri01	22Wi01	26Al01	26Ri01	30Ta01	31Me01
32Ch01	32Ku01	32Ro01	34Al02	34Ge01	34Gr01	34Ha01	34Ke01
34Mc01	35Ge01	35Ma01	35Re01	36Ja01	36Jo01	36Sc01	37De01
37De02	41La01	44Co01	45Co01	45Gr01	45Ro01	47Ma01	47Mc01
48Ad01	48Al01	48Co01	49La01	49Wa01	51Ar01	51Da01	51De01
52Co01	52Ja01	52Ro01	52Sh01	52Wy01	53Be01	53Be02	53Gh01
54Ke01	54Pa01	54Sc01	55Co01	56An01	56Ba01	57Br01	57Gh01
57Ma01	57Ra01	57Sc01	57Sc02	58Bo01	58Mo01	59Hu01	59Ma01
59Sc01	60Be01	60Ka01	61La01	62Ba02	62Fi01	62Wi01	63Ra01
65Ba01	65Th01	66Hu01	66Lu02	66Qu01	67De01	67Ka01	67Kn01
67Mc01	68Di01	68Gh01	68Kn01	69De02	69Mo01	69Pa01	69Sc01
69We01	70Co01	70Ma01	70Or01	71Ah01	71He01	72Ch01	72Sa01
73Ah01	73Al01	73Go01	73Go02	73Go03	73He01	73Mi02	73Ra01
73Ra02	73Ra03	73Ra04	74Ba01	74Ch01	74Go01	74Pa01	74Sh01
75Lu01	75Mo01	75Mo02	76Go01	76Re01	77Ka01	77Mu01	77Sh01
78Ra01	79Ce01	79Pu01	81Ma01	82Um01	83De01	83Li01	84Na01
84Ra01	84Ra02	85Re01	86De02	87Ma01	88Na01	89Ke01	92Ja01
Z = 83		Bi		23 References			
17Ko01	26Al01	30Ta01	32Ro01	34Ca01	36Sc01	47Ma01	52Co01
52Sh01	53Be02	66Hu01	67Ja01	68Ha01	69Mo01	70Dh01	74Su01
75Mo01	77Sh02	80Gu01	82Um01	83Sh01	84Ra01	84Ye01	
Z = 90		Th		17 References			
26Al01	53Be02	59Ro01	62Wi01	67Be01	67Mc01	69De02	70Co01
76Re01	77Ch01	77Mu01	77Ra02	78Cu01	78Ra01	81Cu01	84Ra01
87De02							
Z = 92		U		48 References			
26Al01	32Ku01	32Ro01	33St01	34Ke01	36Ja01	47Ma01	49La01
51De01	52Co01	52Ja01	52Ro01	52Wy01	53Be02	54Pa01	58Mo01
59Ma01	59Ro01	65Th01	67Be01	67Mc01	67Pe01	69De02	69Mo01
70Co01	71He01	73De01	73Ra03	74Cu01	74Ra01	75Mo01	75Mo02
76Ha01	76Re01	77Ch01	77Mu01	78Cu01	81De01	81Cu01	83De01
84Ra01	85Sh01	85We01	86De02	87De01	87De02	88De01	88Ti01
Z = 94		Pu		5 References			
59Ro01	67Mc01	70Co01	77Ca01	77Ch01			

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70Br01	AgCl	81Um01	84Um01	3 REFERENCES
58Er01	Al ₂ O ₃	81Um01	66Fo01	3 REFERENCES
39Wr01	As ₂ O ₇			1 REFERENCE
69We01	B ₂ O ₃			1 REFERENCE
84Ra01	Ba(NO ₃) ₂			1 REFERENCE
81Um01	BaO	84Um01		2 REFERENCES
64Lu03	BeO	65Pr01	82Ba01	3 REFERENCES
84Ra01	Bi(NO ₃) ₃ •5H ₂ O			1 REFERENCE
82Um01	Bi ₂ O ₃	84Um01		2 REFERENCES
92Ja01	BiPO ₄			1 REFERENCE
30Wo01	CCl ₄	32Cr01	67He01	3 REFERENCES
79Wu01	CF ₂ Cl ₂			1 REFERENCE
77Le01	CF ₃ Cl			1 REFERENCE
74Mi01	CF ₄	77Le01		2 REFERENCES
67He01	C ₂ F ₂			1 REFERENCE
77Le01	C ₂ F ₆			1 REFERENCE
69De02	CH			1 REFERENCE
32Cr01	CHCl ₂			1 REFERENCE
79Wu01	CHF ₃			1 REFERENCE
39Wr01	CHI ₃			1 REFERENCE

32Cr01	CH ₂	62Fi01					2 REFERENCES
69We01	(CH ₂) _n						1 REFERENCE
39Ha02	CH ₂ Cl ₂						1 REFERENCE
64Lu01	CH ₂ (OCH ₃) ₂	66Lu01					2 REFERENCES
79Wu01	CH ₃ Cl						1 REFERENCE
84Ra01	(CH ₃ COO) ₂ •CO ₄ •H ₂ O						1 REFERENCE
92Ja01	(CH ₃ COO) ₂ •Pb•3 H ₂ O						1 REFERENCE
79Wu01	CH ₃ F						1 REFERENCE
22Bu01	CH ₃ I	32Cr01	39Ha02				3 REFERENCES
75Da01	CH ₃ OH						1 REFERENCE
33Me01	CH ₄	64Lu01	64Ru01	70De01	70De03	71Be01	13 REFERENCES
73Le01		75Da01	77Le01	81Wu02	82Wu02	72St01	
						89Sa01	
71Be01	CH ₄ O						1 REFERENCE
22Ta01	CH ₁₀ H ₁₆						1 REFERENCE
33Me01	C ₂ H ₂	81Wu01	82Wu01	83Wu01	85Wu01	91Xi01	6 REFERENCES
32Cr01	C ₂ H ₄	33Me01	61Wi01	73Le01	74Mi01	81Wu02	8 REFERENCES
91Xi01						82Wu02	
32Cr01	C ₂ H ₅ Br	32St01	39Ha02				3 REFERENCES
32Cr01	C ₂ H ₅ Cl						1 REFERENCE
32Cr01	(C ₂ H ₅) ₂ •O						1 REFERENCE
66Lu01	C ₂ H ₅ OH	75Da01					2 REFERENCES
74Mi01	(C ₂ H ₅) ₃ •PO ₄						1 REFERENCE

28Ku01	C_2H_6	33Me01	67He01	71Be01	73Le01	81Wu02	7 REFERENCES 82Wu02
81Wu02	C_2H_{10}						1 REFERENCE
71Be01	C_2H_6O						1 REFERENCE
22Ta01	C_3H_6O						1 REFERENCES
22Ta01	$C_3H_6O_2$						1 REFERENCE
71Be01	C_3H_7O						1 REFERENCE
75Da01	C_3H_7OH						1 REFERENCE
33Me01	C_3H_8						1 REFERENCE
22Ta01	C_3H_8O						1 REFERENCE
22Ta01	$C_3H_8O_2$						1 REFERENCE
22Ta01	$C_4H_8O_2$						1 REFERENCE
73Le01	C_4H_{10}	82Wu02					2 REFERENCES
71Be01	$C_4H_{10}O$						1 REFERENCE
58Sa01	$C_5H_8O_2$						1 REFERENCE
30Wo01	C_5H_{12}	32Cr01					2 REFERENCES
23O101	$C_6H_3(CH_3)_3$						1 REFERENCE
23O101	$C_6H_4(CH_3)_2$						1 REFERENCE
23O101	$C_6H_5CH_3$						1 REFERENCE
22Ta01	C_6H_6	23O101					2 REFERENCES
23O101	$C_6H_{12}O$						1 REFERENCE
32Cr01	C_6H_{14}						1 REFERENCE

22Ta01	C ₇ H ₈						1 REFERENCE
230101	C ₇ H ₁₆						1 REFERENCE
28Ku01 81Wu02	CO	33Me01 89Sa01	71Be01	71De03	73Le01	75Da01 79Ba01	9 REFERENCES
22Bu01 71De03 89Sa01	CO ₂	28Ku01 72St01	31De01 73Le01	32Cr01 74Mi01	33Me01 75Da01	62Bu01 79Ba01 71Be01 81Wu02	15 REFERENCES
81Wu01	COS	82Wu01	83Wu01				3 REFERENCES
39Wr01	[(CO ₂) ₂ •Fe+2H ₂ O]						1 REFERENCE
39Ha02	CS ₂	81Wu01	82Wu01	83Wu01			4 REFERENCES
86Br01	CaCO ₃						1 REFERENCE
84Ra01	CaF ₂						1 REFERENCE
39Wr01	CaH ₂						1 REFERENCE
92Ke01	CaSO ₄ •2 H ₂ O	93Ke01	93Ke02	94Ke01			1 REFERENCE
82Ba01	CaSO ₄ :Dy(Teledyne:Teflon disks)						1 REFERENCE
82Ba01	CaSO ₄ :Dy(TLD 900)						1 REFERENCE
84Ra01	CaTe						1 REFERENCE
84Ra01	CdCl ₂						1 REFERENCE
81Um01	CdI ₂						1 REFERENCE
58Bo01	CdSb						1 REFERENCE
39Wr01	CeO ₂	82Um01	84Um01				3 REFERENCES
70Ha02	Ce ₂ O ₃						1 REFERENCE
92Ke01	Co(C ₂ H ₃ O ₂) ₂ •4 H ₂ O	93Ke01	93Ke02	94Ke01			4 REFERENCES

39Wr01	CoCO ₃				1 REFERENCE
84Ra01	CoSO ₄ •7H ₂ O				1 REFERENCE
92Ke01	Cr(C ₂ H ₃ O ₂) ₃ •H ₂ O	93Ke01	93Ke02	94Ke01	4 REFERENCES
81Um01	CrO ₃				1 REFERENCE
39Wr01	Cr ₂ O ₃				1 REFERENCE
70Br01	CsCl				1 REFERENCE
71Ot01	CsF				1 REFERENCE
69Fu01	CsI	70Br01	84Li01		3 REFERENCES
81Um01	CuCl				1 REFERENCE
81Um01	CuO				1 REFERENCE
84Ra01	CuSO ₄ •5H ₂ O				1 REFERENCE
64Co04	D	69No01	72Ra01		3 REFERENCES
35Ma01	D ₂ O	47Ma01	73Ka01	77Ph01	4 REFERENCES
82Um01	Dy ₂ O ₃	84Um01			2 REFERENCES
82Um01	Er ₂ O ₃	84Um01			2 REFERENCES
84Ra01	FeSO ₄ •7H ₂ O	92Ke01	93Ke02	94Ke01	4 REFERENCES
70Ca01	GaAs	84Ra01			2 REFERENCES
70Ca01	GaP				1 REFERENCE
70Ca01	GaSb				1 REFERENCE
81Cu01	GdF ₃				1 REFERENCE
82Um01	Gd ₂ O ₃	84Om01			2 REFERENCES

51G101	GeBr ₄						1 REFERENCE
51G101	GeCl ₄						1 REFERENCE
51G101	GeH ₄						1 REFERENCE
51G101	Ge ₂ H ₆						1 REFERENCE
72Ha01	HCl	74Mi01					2 REFERENCES
82Um01	(HCOO) ₂ •Pb	84Um01					2 REFERENCES
69Be01	HF	69Be02					2 REFERENCES
84Ra01	HgI ₂						1 REFERENCE
21He01	H ₂ O (Water)	22Ta01	230101	32Ch01	35Ge02	36 REFERENCES	
52Wy01		53Gh01	54Pa01	57Ma01	58Wo01	35Ma01	47Ma01
63Sc01		64Te01	65Th01	67Ka01	69Be01	60wy01	62Ba02
70De03		71Be01	73Ka01	74Jo01	74Su01	69Be02	69We01
75Ph01		75Ra01	77Ph01	78Pe01	835h02	75Ah01	75Da01
86Br01						84Ra01	85Bi01
32Cr01	H ₂ S	67He01	69La01	72Ha01	72St01	74Mi01	7 REFERENCES
						91Xi01	
82Um01	Ho ₂ O ₃	84Um01					2 REFERENCES
70Ca01	InAs						1 REFERENCE
70Ca01	InP						1 REFERENCE
70Ca01	InSb	84Ra01					2 REFERENCES
70Br01	KBr	81Um01	84Li01				3 REFERENCES
84Ra01	KBrO ₃						1 REFERENCE
81Um01	KCl	84Li01					1 REFERENCE
81Um01	KH ₂ PO ₄	84Ra01					2 REFERENCES
69Fu01	KI	70Br01	81Um01	84Um01			4 REFERENCES

84Ra01	KNO ₃				1 REFERENCE
84Ra01	K ₂ Cr ₂ O ₇				1 REFERENCE
39Wr01	K ₂ TeO ₃				1 REFERENCE
81Cu01	LaF ₃				1 REFERENCE
82Um01	La ₂ O ₃	84Um01			2 REFERENCES
65Pr01	LiD				1 REFERENCE
39Wr01	LiF	76Cr01	76La01		3 REFERENCES
82Ba01	LiF:Mg,Ti (TLD 600)				1 REFERENCE
82Ba01	LiF:My,Ti (TLD 700)				1 REFERENCE
82Ba01	Li F-7(Teledyne)				1 REFERENCE
65Pr01	LiH	69De02			2 REFERENCES
81Um01	LiOH				1 REFERENCE
82Ba01	Li ₂ B ₄ O ₇ :Mn (TLD 800)				1 REFERENCE
81Um01	MgO				1 REFERENCE
92Ke01	MgSO ₄ •7 H ₂ O	93Ke01	93Ke02	94Ke01	4 REFERENCES
39Wr01	MnO	81Um01			2 REFERENCES
84Ra01	MnSO ₄ •H ₂ O	92Ke01	93Ke02	94Ke01	4 REFERENCES
70De03	NH ₃	71Be01	72St01	75Da01	5 REFERENCES
39Wr01	NH ₄ Br			91Xi01	1 REFERENCE
39Wr01	NH ₄ Cl				1 REFERENCE
84Ra01	NH ₄ NO ₃				1 REFERENCE

39Wr01	NH ₄ VO ₃						1 REFERENCE
69Be01	N ₂ H ₄	69Be02					2 REFERENCES
71Be01	NO	71De03	72St01	73Le01	75Da01	81Wu02	7 REFERENCES 82Wu02
71Be01	N ₂ O	71De03	72St01	73Le01	75Da01	78Bi01	9 REFERENCES 79Ba01
81Wu02		82Wu02					
84Ra01	Na ₂ B ₄ O ₇ •10H ₂ O						1 REFERENCE
84Li01	NaBr						1 REFERENCE
81Um01	Na ₂ CO ₃						1 REFERENCE
59Ba01	NaCl	76Cr01	81Um01	84Li01	84Ra01		5 REFERENCES
76Cr01	NaF	81Um01					2 REFERENCES
81Um01	NaHCO ₃						1 REFERENCE
54Ho01	NaI	54Pa01	63Sc01	69Fu01	76Ma01	84Li01	6 REFERENCES
81Um01	NaNO ₂						1 REFERENCE
81Um01	NaNO ₃	84Ra01					2 REFERENCES
81Um01	Na ₂ SO ₄						1 REFERENCE
92Ke01	NaVO ₃	93Ke02	94Ke01				3 REFERENCES
84Ra01	NaWO ₄ •2H ₂ O						1 REFERENCE
92Ja01	Na ₂ WO ₄ •2H ₂ O						1 REFERENCE
82Um01	Nd ₂ O ₃	84Um01					2 REFERENCES
81Um01	NiO						1 REFERENCE
72Ha01	PH ₃	91Xi01					2 REFERENCE

92Ja01	Pb(NO ₃) ₂						1 REFERENCE
58Bo01	PbTe	66Lu02					2 REFERENCES
82Um01	PrO ₂	84Um01					2 REFERENCES
70Br01	RbCl	81Um01					2 REFERENCES
77Le01	SF ₆						1 REFERENCE
22Bu01	SO ₂	30Co01	30Wo01	32St01	81Wu01	82Wu01 83Wu01	7 REFERENCES
39Wr01	Sb ₂ O ₃						1 REFERENCE
73Hr01	SeH ₂						1 REFERENCE
89Wa01	SiC						1 REFERENCE
72Ha01	SiF ₄						1 REFERENCE
72Ha01	SiH ₄						1 REFERENCE
66Er01	SiO ₂	67Er01	67Er02	74Mi01			4 REFERENCES
82Um01	Sm ₂ O ₃	84Um01					2 REFERENCES
66Lu02	SnTe						1 REFERENCE
81Um01	SrF ₂						1 REFERENCE
84Ra01	Sr(NO ₃) ₂						1 REFERENCE
39Wr01	SrO						1 REFERENCE
82Um01	Ta ₂ O ₅	84Um01					2 REFERENCES
81Cu01	ThF ₄						1 REFERENCE
84Ra01	ThO ₂						1 REFERENCE
39Wr01	TiO ₂	81Um01	84Ra01				3 REFERENCES

81Cu01	UF ₄						1 REFERENCE
70Ma01	UO ₂						1 REFERENCE
84Ra01	UO ₂ (COO) ₂ ·3H ₂ O						1 REFERENCE
70Fi01	VB ₂						1 REFERENCE
70Fi01	VC						1 REFERENCE
70Fi01	VN						1 REFERENCE
70Fi01	V ₂ O ₃						1 REFERENCE
70Fi01	V ₂ O ₄						1 REFERENCE
70Fi01	V ₂ O ₅						1 REFERENCE
84Ra01	ZnO						1 REFERENCE
92Ke01	ZnSO ₄ ·7 H ₂ O	93Ke01	93Ke02	94Ke01			4 REFERENCES
84Ra01	ZnTe						1 REFERENCE
32Cr01	Zr(CH ₃) ₂						1 REFERENCE
39Wr01	ZrO ₂	81Um01					2 REFERENCES
22Ta01	Acetone						1 REFERENCE
91El01	Acetophenone						1 REFERENCE
91El01	Acetylacetone						1 REFERENCE
22Bu01	Air	28Ku01	29Sc01	30Wo01	31De01	31Sp01	13 REFERENCES
32St01		33Me01	54Cu01	70Mc02	74Mi01	76Ha02	32Cr01
71Go01	Anisole						1 REFERENCE
74Jo01	Aorta						1 REFERENCE
93Na01	Arabinose						1 REFERENCE

70Ma01	Asphalt	1 REFERENCE
91El01	Bakelite 93Si01	1 REFERENCE
86Si01	Bell Metal (75Cu-25Sn)	1 REFERENCE
91El01	Benzaldehyde	1 REFERENCE
71Go01	Benzene	1 REFERENCE
91El01	Benzyl Alcohol	1 REFERENCE
75Ra01	Blood	1 REFERENCE
75Ph01	Biological Materials (30)	1 REFERENCE
86Br01	Bone Standard	1 REFERENCE
74Jo01	Brain 75Ra01	2 REFERENCES
86Si01	Brass (66Cu-34Zn)	1 REFERENCE
58Sa01	Carbon Steel	1 REFERENCE
74Jo01	Cartilage	1 REFERENCE
36Bi01	Cellophane	1 REFERENCE
91El01	Cellulose-triacetate	1 REFERENCE
69Se01	Claryl	1 REFERENCE
86Br01	Coconut Oil	1 REFERENCE
57Ma01	Concrete 62Ba02 67Ka01	3 REFERENCES
86Br01	Corn Oil	1 REFERENCE
58Sa01	Cr Steel	1 REFERENCE
71Go01	Cyclohexane	1 REFERENCE

71Go01	Decalin	1 REFERENCE
86Br01	Dried Lean Meat	1 REFERENCE
86Br01	Dry Bone	1 REFERENCE
75Ra01	Egg White	1 REFERENCE
75Ra01	Egg Yolk	1 REFERENCE
91El01	Ether	1 REFERENCE
35Ma01	Ethyl Alcohol (ethanol)	3 REFERENCES
	63Lu01	
	91El01	
91El01	Ethylacetoacetate	1 REFERENCE
74Jo01	Fat	2 REFERENCES
	86Br01	
91El01	Formalin	1 REFERENCE
81Da01	Formvar	1 REFERENCE
93Na01	Fructose	1 REFERENCE
93Na01	Galactose	1 REFERENCE
86Br01	Ghee	1 REFERENCE
67Ka01	Glass	1 REFERENCE
93Na01	Glucose	1 REFERENCE
91El01	Glycerol	1 REFERENCE
86Si01	Gunmetal (66Cu-10Sn-4Zn)	1 REFERENCE
74Jo01	Kidney	1 REFERENCE
81Da01	Kimfoil	1 REFERENCE
86Si01	Linotype Metal (79Pb-16Sb-5Sn)	1 REFERENCE

74Jo01	Liver	75Ra01				2 REFERENCES
58Sa01	Lucite	78Pe01	91Ke01	93Ke01	93Ke03	5 REFERENCES
74Jo01	Lungs					1 REFERENCE
67Ka01	Magnetite Concrete					1 REFERENCE
69Se01	Makrofol					1 REFERENCE
93Na01	Maltose					1 REFERENCE
93Na01	Mannose					1 REFERENCE
70Ma01	Marble					1 REFERENCE
70Ma01	Masonite					1 REFERENCE
93Na01	Melzitose					1 REFERENCE
93Na01	Melibiose					1 REFERENCE
69Se01	Melinox	70De02				2 REFERENCES
64Ru01	Methane	75Lo01				2 REFERENCES
91El01	Methyl Alcohol (methanol)					1 REFERENCE
75Ra01	"Mix-D"					1 REFERENCE
S8Sa01	Mn Steel					1 REFERENCE
S8Sa01	Monel Metal					1 REFERENCE
60Eh01	Mylar	66He01	69Se01	91Ke01		4 REFERENCES
75Ra01	Normal and Cancerous Tissue					1 REFERENCE
91Ke01	Nylon	93Ke01	93Ke03			3 REFERENCES
71Go01	O-Xylene					1 REFERENCE

93Ke01	PTFE						1 REFERENCE
30Ta01	Paraffin	32Cr01	34Gr01	34Ha01	70Ma01	71Go01	6 REFERENCES
74Ca01	Parylene C						1 REFERENCE
71Go01	P-Cymene						1 REFERENCE
58Sa01	Perspex (Lucite($C_5H_8O_2$))	91El01	93Si01				3 REFERENCES
58Sa01	Phosphor Bronze						1 REFERENCE
71Go01	Plastic Scintillator						1 REFERENCE
65Th01	Plexiglass	70Ma01	75Ra01				3 REFERENCES
86Si01	Plumber Solder (50Pb-50Sn)						1 REFERENCE
52Co01	Polyethylene	60Eh01	78Pe01	86Br01			4 REFERENCES
86Br01	Polyisoprene						1 REFERENCE
74Ca01	Polypropylene C_3H_6O						1 REFERENCE
70De02	Polypropylene (C_3H_6) _n	81Da01					2 REFERENCES
58Ba01	Polystyrene	65Th01	67Er01	67Er02	75Ra01		5 REFERENCES
70Ma01	Porcelain						1 REFERENCE
65Th01	Presdwood						1 REFERENCE
93Na01	Raffinose						1 REFERENCE
93Na01	Rhamnose						1 REFERENCE
93Na01	Ribose						1 REFERENCE
70Ma01	Rubber						1 REFERENCE
74Jo01	Skin						1 REFERENCE

86Si01	Solder (67Pb-33Sn)	1 REFERENCE
86Si01	Solder Soft (40Pb-60Sn)	1 REFERENCE
65Th01	Stainless Steel 70Ma01	2 REFERENCES
74Jo01	Striated Muscle	1 REFERENCE
60Eh01	Teflon (CF ₂) 64Te01 70Ma01 91Ke01 93Ke03	5 REFERENCES
69Se01	Terphane	1 REFERENCE
74Jo01	Testes	1 REFERENCE
74Jo01	Thyroid	1 REFERENCE
71Go01	Toluene	1 REFERENCE
75Ra01	Various Muscle	1 REFERENCE
74Jo01	Vena Cava	1 REFERENCE
65Th01	W-Alloy	1 REFERENCE
S8Sa01	W-Steel	1 REFERENCE
86Br01	Wax	1 REFERENCE
85Pe01	A-150 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	A-174 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	A-180 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	B-100 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	B-109 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	B-110 Dosimetry-Phantom Plastic	1 REFERENCE
85Pe01	C-552 Dosimetry-Phantom Plastic	1 REFERENCE
75Lo01	P-10 Gas	1 REFERENCE

